

# THE CARRIER

Volume XLVI Number 6

www.mdarc.org

June 1999



## JUNE MEETING

Friday June 18

**7:30 P.M.**

(Note time change)

Our Savior Lutheran Church  
1035 Carol Lane  
Lafayette Calif.

The Speaker will be Cliff Warrick,  
Emergency Service Manager at the  
Contra Costa County Office of  
Emergency Services. (See article)

## Field Day 1999

**June 25-27**

Its that time again for Field Day. The location (hopefully) is the top of Mt. Diablo. The reason we say hopefully is that there is a new crew of rangers and they do not know us or what we do. If we are up there this year (which appears likely) we will have some new rules to follow in the park. As it stands now everyone coming into the park will have to pay the day use fee each day you come and go. If you stay up there the entire time you only pay once for the entire period. It was heavily emphasized that there will be no alcoholic beverages allowed in the park. Be listening to the repeater for updates about the location.

Now, about Field Day. We go up Friday afternoon and spend the into the evening setting up antennas and stations. Saturday the contest begins at 11am our time and runs for 24 hours. We will be running 80, 40, 20, 15,10, 6, 2, 450, plus possibly some ATV, packet, 1296 and whatever else show up. I still need an official greeter for the public, someone to assist me with the frequency announcements on the repeater, someone to originate 2 and relay 10 messages, band captains for 450, 1296, packet, ATV, OSCAR. 450 will be run from the Salvation Army Canteen which is coming with a rig and antenna. We need as many people as we can get to operate during the day , and stay overnight and operate on Saturday all night. Everyone can operate any band or mode because we are running as an Extra Class. The Salvation Army is feeding us again this year so all you need to bring is yourself, clothing, shelter (no tent stakes allowed) sun-screen, sleeping bag, etc.

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If you cannot come to the FD Site PLEASE contact us on as many bands as possible. We will be giving out our operation frequencies on the repeater. Contact us there and get the frequencies for contacting the contest stations. If you are at home the exchange for the contest would be 1D and your ARRL section (most of our members are in the East Bay Section.) If you are Mobile your exchange would be 1C and the section.

For more info listen to the Thursday night net or contact me at the numbers in the club roster. I will also be at the June club meeting.

See (or Hear) you on Field Day.  
Lauren Styles, WA6CIE

### **MDARC General Meeting Minutes, May 21, 1999**

The meeting was called to order by Secretary Paul Dickey, N6JOX, at 7:00 p.m. The brief meeting took place before the auction. The minutes of the last meeting were approved as printed in the Carrier. A loan of \$2,000 to Pacificon 1999 was approved.

Lauren, WA6CIE, reminded members of Field Day, the fourth weekend in June.

Jeff, KF6EUM, announced public service events. It was noted that John Schulze, KF6MNL, would conduct the drawing at the break, at approximately 8 p.m.

The meeting was adjourned at 7:15 p.m. for the auction conducted by Paul Girard, KC6TZU.  
Respectfully submitted,

Paul Dickey, N6JOX,  
Secretary

### **Four Scenarios That Illustrate Uses of the Crossband Repeating Function of Dual- Band Radios**

*(by Pete Harris, KE6ZIW)*

In last month's Carrier article, "Some Experiences With Crossband Repeating On Dual-Band Mobile", I described some experimentation I've been doing with the crossband repeating function. When crossband repeating in 1-way mode, a dual-band radio can receive signals from another radio on one band (example: the 440 MHz band), and simultaneously retransmit them on the other band (example: the 2 meter band). In 2-way mode the crossbanding radio not only retransmits outgoing signals from the originating radio but also retransmits incoming signals back on the originating band. I've recently been doing more experimenting with this function during some of our club's public service events, and have given more thought to different ways it can be useful. I'd like to describe four scenarios that illustrate this. I encourage others with more ideas or comments about it to e-mail them to me (odyssey@ccnet.com), or to write follow-up articles.

#### **Scenario #1 - Use of 1-way crossbanding to increase the transmit range of an HT and to extend HT battery life:**

As part of the MDARC radio support team for the recent March of Dimes Walk, I was stationed at a checkpoint on a trail about 1/4 mile away from my car. My car was parked close to a hilltop peak, but I was down in a little valley with a dual-band HT (hand-held) radio. Because of the lower power and poorer position of the HT, I had trouble transmitting to the 2 meter repeater we were working. So I crossbanded into the dual-band mobile radio in the car. I used a non-repeater, 440 frequency to transmit to the car, and set up the car radio to

retransmit my signals in duplex mode on the team's chosen 2 meter repeater frequency (medium power was sufficient for the car radio to reach the repeater and reduced car battery drain). I did not need the car radio to retransmit back to me on the 440 band, because I was able to receive the repeater's 2 meter signals directly. Therefore, I set up the car radio for 1-way crossbanding only. Besides getting out to the repeater with no problem, I was able to use low power on the HT. One HT battery lasted the entire 6 hour event, despite lots of transmitting duty. Another ham who was at a different checkpoint about a mile from my location with a dual-band HT, also found it easier to reach my car radio than to reach the repeater. He also crossbanded through my car radio to the repeater.

**Scenario #2 - Use of 2-way crossbanding to allow work on a 440 repeater when some communications team members have only 2 meter radios:**

If a ham radio safety or emergency communications team needs to use a 440 repeater, but some of the team members have only 2 meter radios, 2-way crossbanding can be used to make this possible. A crossbanding radio can be set up to receive on a 2 meter simplex frequency, and retransmit in duplex on the 440 repeater frequency. Signals received back from the repeater are again retransmitted by the crossbanding radio, back on the simplex 2 meter frequency, for those with 2 meter-only radios. The power levels of each crossbanding direction can be individually set to minimize battery usage by the crossbanding radio.

**Scenario #3 – Use of 1-way crossbanding to extend the range of a communications team using simplex:**

If a ham radio safety or emergency communications team needs to use a simplex frequency, 1-way crossbanding can be used to

greatly extend the range of the team's communications. A crossbanding radio can be placed at either a location that is roughly central to the locations of team members, or at a strategically placed location, based on height and position, within range of team members. The crossbanding radio is set to receive on a simplex 2 meter frequency and to retransmit at high power on a simplex 440 frequency. Team members with dual-band radios transmit on 2 meter and should receive on 440 (turning down the 2 meter volume to eliminate possible interference from the original 2 meter transmissions). Team members with 2 meter-only radios function as they normally would. Their transmissions are also boosted by the crossbanding radio but they don't enjoy the benefits of the boosted incoming 440 signal.

**Scenario #4 - Use of 2-way crossbanding to allow emergency portable work with an HT in a remote area, using simplex:**

A ham radio operator is doing search and rescue work in a remote area with a dual-band HT. The ham needs to communicate with others by simplex. A crossbanding radio with higher power, better antenna and/or in a better position (this might even be a crossbanding HT) can be set up to retransmit both the signals coming from the remote HT and the signals going back to the remote HT. This scenario might include a team of operators with HT's, all using the crossbanding radio as a repeater to communicate with each other.

A couple of words of caution repeated from last month's article: When a radio is set up for crossband repeating it needs to be carefully monitored. Any signal coming in to the receive band, or to either band in 2-way mode, is retransmitted on the other band, *even just background noise if the squelch is set too low!* Further, in the 2-way crossband mode you are putting a heavy load on the crossbanding radio

and its battery. It is transmitting both incoming and outgoing communications. Definitely use the lowest power necessary for each direction, and use 1-way crossbanding whenever that is sufficient.

When used carefully and under appropriate conditions, the crossband repeating function can be an extremely valuable tool.

**Pete Harris, KE6ZIW**  
odyssey@ccnet.com

### **MDARC Board Meeting Minutes – May 3, 1999**

President Estep called the meeting to order at 7:30 p.m.

The Membership Chair was absent but Greg reported that we now have 395 members with 208 of those members supporting the repeater system.

The Social Chair, George, and his Assistant Chairperson, Tracey reported that the Carrier Editor removed much of the Picnic Flyer information from the Carrier. The cost is \$3.00 for everyone including guests. Payment is due by the July 14 but will be accepted at the "door" to the picnic. Greg has agreed to help with the games. Because of an excess inventory of "Sodipop" we will auction soft drinks at the picnic.

George was very concerned that many people are leaving the monthly meetings prior to the speaker completing his or her program. A great deal of discussion took place. As a result, it was moved, seconded and passed that the monthly meeting times be changed as follows:

V.E. testing	6:00 p.m.
MDARC meeting start	7:30 p.m.
Speaker/Program	8:00 p.m.
Break	9:00 p.m.
Prize drawing	9:10 p.m.

Any required follow-on will be conducted after the prize drawing or the meeting will be closed. These changes will be promoted in the Carrier and on Jay's net.

These changes are considered to be a trial to see if the membership likes it.

The Vice-President reported that the speaker for June is Cliff Warrick, Deputy Manager of the Contra Costa County E.O.C. Brad Wyatt is going to be scheduled for August or September. October will be nominations for officers. Programs for July, August and September have not been finalized.

The Repeater Chairman, Jim, discussed some questions he had for the Board related to the repeater jamming. There was discussion regarding the Boards approach and suggested solutions.

The Treasurer, Marie, reported a total balance of all accounts of \$30,224.

John Stuart displayed a new tool that could be made available for the Repeater Chairman if he needs it. It was the biggest screwdriver we had ever seen.

73  
Paul N6JOX

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**DUNBAR, CA 91606**  
2402 W. Victory Blvd.  
(818) 848-1788  
(800) 854-6046  
Sito, KASHT, Mgr.  
Victory Blvd. at Sunset Vista  
1 mi. west I-5

**OAKLAND, CA 94606**  
2210 Livingston St.  
(510) 534-5757  
(800) 854-6046  
Mark, KESOP, Mgr.  
I-880 at 52nd Ave. ramp

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(619) 560-6800  
(800) 854-6046  
Tom, K3MEX, Mgr.  
Hwy. 163 & Cleveland Mesa

**SUNNYVALE, CA 94086**  
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(408) 736-9496  
(800) 854-6046  
Ken, K1ZKM, Mgr.  
KON@HAMRADIO.COM  
Lawrence Expwy.  
So. from Hwy. 101

**NEW CASTLE, DE 18720**  
1508 N. Dupont Hwy.  
(302) 322-7082  
(800) 854-6046  
Bob, W1COK, Mgr.  
RT.13 1/4 mi. So. I-295

**PORTLAND, OR 97225**  
1708 S.W. Pacific Hwy.  
(503) 588-0555  
(800) 854-6046  
Earl, K2TDA, Mgr.  
Tigard Hwy. and  
from Hwy. 5 & 917

**ROSEBURG, OR 97221**  
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(503) 746-7373  
(800) 854-6046  
Joe, K0BGA, Mgr.

**PHOENIX, AZ 85021**  
1839 W. Camelback Ave.  
(602) 742-3515  
(800) 444-8476  
Gary, W7BLY, Mgr.  
1 mi. east of I-17

**ATLANTA, GA 30340**  
RDY Midway Highway  
(770) 263-0700  
(800) 444-7927  
John, K04MLC, Mgr.  
Doraville, 1 mi. so. of I-285

**WOODBRIDGE, VA 22191**  
Washington D.C. area  
14803 Build America Dr.  
(703) 643-1083  
(800) 444-4798  
Rick, AA8CB, Mgr.  
Exit 161, I-495, So. to US 1

**SALEM, NH 03078**  
Bowen, MA 01806  
224 N. Broadway  
(603) 898-3760  
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## Old Business

It was agreed that the President would continue to keep the Clubs MFJ antenna tuner in his possession.

The VE testing process is working satisfactorily. It is not clear if Gene Angvick has been officially appointed to the coordinator position even though he has been doing the work very well. It was proposed that a new committee be appointed called the MDARC VE Team with Gene in charge.

The Web page is in need of updates for the ham classes and Amazon. Com.

## New Business

A motion was moved, seconded and passed to loan PACIFICON \$2,000 to cover some of the up front expenses.

It was reported that the trailer is fully operational and complete. It was indicated that some outstanding bills existed but no one present knew the amounts outstanding. It will be discussed further at the next meeting. It is not clear who will be accountable for managing the trailer.

Acting Secretary  
Dick, KT6X

## Magic of the Social Committee

By Greg Estep, KE6VTA

Write down in your calendar that the June meeting starts at the new time of 7:30. The business portion will end at 8:00 and the speaker will end by 9:00. The Door Prizes and the rest of the business meeting will be after the speaker.

Two people comprise the Social Committee, George Roush, WB6OFH, and Tracey Schwartz, KE6TOT. They put together many functions and I would like to thank them and remind all of you to mark July 17 on your calendar for the annual MDARC picnic.

George and Tracey put together last year's very successful picnic and Holiday party and we all look forward to these events each year. However, here is some trivia that you may not have realized about George and Tracey.

1. Their names have been on the same page in the MDARC Membership Directory for the last two years.
2. Both have 6 letters in their first names.
3. Both can be found at the MDARC Board meeting that will be on June 7 at 7:30 PM at Emil Villas in Concord.
4. You can tell them apart because George brings the doughnuts to the club meetings. Tracey always brings a smile.

Give each of them a hug the next time you see them. Both George and Tracey do excellent work. Bring one of your friends to the meeting and introduce them to George, that will make his day. As for Tracey, volunteer to help with the picnic and you will see that smile.

On another note, I would like to thank Sam Lipson, KO6JR, for putting together last month's Carrier. Sam is always there when we need him. I would also like to correct my article last month, Richard Shappee, WA5HQJ, is PACIFICON

Banquet Program chair.

73, Greg

## The June Meeting Speaker

by Mike Dickey

The next MDARC meeting will be Friday, June 18, 1999 at our usual location, Our Savior Lutheran Church in Lafayette. Remember, this meeting starts earlier than before, at **7:30PM, NOT 8:00PM.** The business meeting will start promptly and last one-half hour. Any business left unresolved at that time will be tabled until after the speaker. The speaker will be introduced promptly at 8:00PM and will have up to one hour for his presentation, including questions and answers. We will have our break after the speaker this time, for refreshments and raffle tickets. Then we will reconvene the business meeting if needed to conclude what was tabled.

Our speaker at the June meeting will be Cliff Warrick, Emergency Service Manager at the Contra Costa County Office of Emergency Services. We have had presentations before on emergency preparations, mostly about the what, when and how of emergency response. But Cliff is going to take a somewhat different tack. He will talk about the why of emergency response and how amateur radio fits into the overall response effort to an emergency. Cliff will also discuss the Emergency Operations Center and how it works. I have heard Cliff speak. He is a very entertaining and amusing speaker, while his long experience in this field in the Air Force, Solano County and now here in Contra Costa gives him the background to pass on valuable information.

So plan to be here for this meeting. You won't be disappointed.

Mike  
KE6JGA



## NETS

### **W6CX Nets**

**APRS Net**      Tuesdays 1930 Hours  
 147.060/+ (100 PL)  
 Net Control: Barry, KC6WYA

**Phone Net**      Thursdays 1930 Hours  
 147.060/+ (100 PL)  
 Net Control: Jay Caldis, KT6Y

**ATV Net**      Thursdays 2000 Hours  
 Net Control: Mike Burke, KB6RMT  
 Alternate: Sylvia, KC6YJV

**Youth Net**      Thursdays 1900 Hours  
 147.060/+ (100 PL)  
 Net Control: Jeff Burke, KE6YAW

**Contra Costa County Emergency Services HF Net**  
 First Thursday following first Wednesday, 2000 Hours, 3.890 MHz. Net Control: Jeff Straus, KE6J

**Sheriff's Amateur Radio Communications Team**  
 Clay Yale, N6YBQ  
 707-785-2402

**CCRA Net**      **Mondays 1935 Hours**  
**147.735- 145.49- 145.41- PL: 107.2**

**CCCC Net**      **Thursdays 1930 Hours**  
**145.11- PL: 82.5**

### **Contra Costa County ARES/RACES Nets**

Thursdays, 1900 Hours

**Central County**      145.680 Simplex  
 Jim Brunk\*, N6BHX  
 (925) 372-8248

**East County**      146.535 Simplex  
 Jim Tittle\*, KC6SOE  
 (925) 432-3220

**South County**      146.355/+ (100 PL)  
 Ed Ritchie\*, K6SFD  
 (925) 837-3265

**West County**      145.110/-  
 Rich Parker\*, KD6JCT  
 (510) 237-2777

QSY to 147.735/- (107.2 PL) at 1920 Hours  
 Meeting of all County ARES/RACES Nets  
 Sam Lipson, District Emergency Coordinator, KO6JR  
 (925) 229-5705

\* Assistant District Emergency Coordinator

### **From the Editor** Wayne WB6WZV

The baton has been passed, and a new era has started. Much applause and thanks are due Jerry Gardner for his years of hard work. If my shift can do as well as his did, I will be very pleased. The Carrier has provided MDARC with a strong voice and kept information flowing in a fun and accurate manner.

Sam also needs a hand for getting the Carrier out before a new editor could be talked in to the task. He did a great job at a really hard time. Thanks again Sam.

In one way, it is nice if there are no article as that means no editing to do and the cost of mailing will be very small. Of course, you will not be get your information out, nor will you hear about interesting events and projects that the other club

members have participated in. So why not get out the old computer, or what have you, and get your article in by the first of the month. We will be going to press on the first day each and every month. It will not be held for anything short of the end of the world. As the old saying goes "the sooner the quicker". Thanks.

The material can be in a wide range of forms and formats. Email is the way I like it to arrive, (wmerryma@pacbell.net) but on disk, or even clean typed hard copy is OK. As for format, Rich Text Format (RTF) is the easiest and most general. However, Word or any text format is OK.

See you in print,  
 Wayne WB6WZV

## CALENDER OF EVENTS

June 18	7:30 PM MDARC	General Meeting	(Note new time)
June 19	8:00 AM PACIFICON	General Meeting	at Emil Villas in Concord
July 12	7:30 PM MDARC	Board Meeting	at Emil Villas in Concord (Note this is the second Monday)
July 16	7:30 PM MDARC	General Meeting	

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**The Carrier**  
**Newsletter of the Mt. Diablo Amateur Radio Club**  
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**MDARC MEETING**

**June 18 7:30**